

having white corollas.

The type of the form was collected by C. E. Smith, Jr., F. A. Peterson, and Narcisso Tejeda (no. 3940) in gray to whitish soils with occasional calcareous outcrops and thorn-scrub-cactus cover, at an altitude of about 1500 to 1800 meters, along the Tehuacán-Orizaba highway just above Azumbilla, Puebla, Mexico, on July 18, 1961, and is deposited in the United States National Herbarium at Washington.

MATERIALS TOWARD A MONOGRAPH OF THE GENUS VERBENA. XVI

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VERBENA LIPOZYGIOIDES Walp.

Additional literature: F. Phil., Cat. Pl. Vasc. Chil. 220. 1881.

Fruiting-calyx connivent at the apex; schizocarp half as long as the mature calyx; cocci black or madder-red, oblong, areolate, sulcate on the dorsal surface, subtuberculate above.

Walpers (1845) places this species in his Section Verbenaca, Subsection Inermes, Group Thymoideae, along with V. thymoides Cham. and V. clavata Ruiz & Pav. He describes a variety minima as "foliis simplicioribus trifidis, lacinula media apice plerumque profunde tridentata. -- Habitu multo graciliore recedit foliisque brevioribus vix ultra 3 lin. longis capitulis paucifloris subumbellatis, sed ceterum hanc non diversam esse existimo." He cites no type material for the species, but gives as type of the variety Bertero 1390 from somewhere in Chile.

Schauer (1847), however, cites Besser 136 as the only collection of the species seen by him, so it may well be that this should be regarded as the logotype of the typical form of the species. Schauer states that the species is related to V. berterii (Meisn.) Schau. "sed foliis tenuiter multipartitis, spicis sessilibus corollaque glabra distincta."

The species has been collected at 500 meters altitude, flowering in October. Herbarium material has been misidentified and distributed as V. dissecta Willd.; on the other hand, the Claude-Joseph 4013 distributed as V. lipozygioides is actually V. berterii (Meisn.) Schau.

Gay (1849) says "Planta bien distinta de las especies de esta seccion por su color ceniciento, la pequenez de sus hojas y de sus divisiones, por el menor volumen de sus cabezuelas y la forma de sus bracteas. La var. de que habla Walpers no seria por acaso la Verb. Berterii, de la cual sin embargo solo se asemeja por los apendices inclusos de las anteras?"

Acevedo de Vargas (1951) cites: CHILE: Santiago: B. Davila

s.n. [1869] (Sg--42454) "forma con el tubo de la corola pubescente". Coquimbo: C. Gay 1085 (Sg--54761). Province undetermined: Besser 136 [Macbride photos 17427] (Sg--67537--photo of logotype).

Only two herbarium specimens and 2 mounted photographs of the logotype have thus far been examined by me.

Citations: CHILE: Ovalle: Claude-Joseph 4988 (W--1422113). Santiago: Grandjot & Grandjot 3975 (N). Province undetermined: Besser 136 [Macbride photos 17427] (Kr--photo of logotype, N--photo of logotype).

VERBENA LITORALIS H.B.K., Nov. Gen. & Sp. Pl. 2: 276, pl. 137. 1818.

Synonymy: Verbena litoralis Humb. & Bonpl. apud Steud., Nom. Bot., ed. 1, 873. 1821. Verbena litoralis Humb. apud Spreng. in L., Syst. Veg., ed. 16, 2: 748. 1825. Verbena lanceolata Willd. ex Spreng. in L., Syst. Veg., ed. 16, 2: 748. 1825. Verbena littoralis Humb. apud Hook., Bot. Misc. 1: 166. 1829. Verbena littoralis Humb. & Bonpl. apud Steud., Nom. Bot., ed. 2, 2: 750. 1841. Verbena littoralis Humb. & Kunth apud D. Dietr., Syn. Pl. 3: 600. 1843. Verbena affinis Mart. & Gal., Bull. Acad. Brux. 11 (2): 322. 1844. Verbena bonariensis β littoralis Hook. ex Walp., Repert. Bot. Syst. 4: 20. 1845. Verbena littoralis H.B.K. apud Walp., Repert. Bot. Syst. 4: 20, in syn. (1845); Rosengurtt, Estud. Prad. Nat. Urug. 3: 236. 1943. Verbena littoralis var. ? glabrior Benth., Bot. Voy. Sulph 153. 1846. Verbena littoralis β leptostachya Schau. in A. DC., Prodr. 11: 542. 1847. Verbena littoralis Kunth apud Schau. in A. DC., Prodr. 11: 542. 1847. Verbena bonariensis var. littoralis Hook. apud C. Gay, Hist. Fis. Chile Bot. 5: 21. 1849. Verbena bonariensis β littoralis Hook. apud Schau. in Mart., Fl. Bras. 9: 189, in syn. 1851. Verbena nudiflora Nutt. ex Turcz., Bull. Soc. Nat. Mosc. 36 (2): 195. 1863 [not V. nudiflora L., 1808]. Verbena litoralis Kunth apud R. A. Phil., Anal. Univ. Chil. 35: 192. 1870. Verbena litoralis var. leptostachya R. A. Phil., Anal. Univ. Chil. 35: 192. 1870. Verbena litoralis var. leptostachya Lorentz, Veg. Nordeste Prov. Entre Rios, ed. 1, 122, sphalm. 1878. Verbena hanseni Greene, Pittonia 3: 308. 1898. Verbena litoralis var. leptostachya Schau. apud Briq., Ann. Conserv. & Jard. Bot. Genève. 7-8: 292, in syn. 1904. Verbena bonariensis var. littoralis Hook. apud Reiche, Fl. Chile 5: 283, in syn. 1910. Verbena litoralis var. α pycnostachya DC. apud Reiche, Fl. Chile 5: 283, in syn. 1910. Verbena litoralis var. β leptostachya DC. apud Reiche, Fl. Chile 5: 283, in syn. 1910. Verbena littoralis L. ex Hauman-Merck, Anal. Mus. Argent. Hist. Nat. Buenos Aires 24: 413. 1913. Verbena parviflora Larrañ., Escritos D. A. Larrañaga 2: 9. 1923 [not V. parviflora Ruiz, 1845]. Verbena littoralis var. pycnostachya Hochr., Candol-

lea 5: 188. 1934 [not V. littoralis α pycnostachya Schau., 1847].
Verbena littoralis var. leptostachya Schau. ex Moldenke, Prelim.
 Alph. List Invalid Names 47, in syn. 1940. Verbena littoralis L.
 ex Moldenke, Suppl. List Invalid Names 9, in syn. 1941. Verbena
hansenii Greene ex Jepson, Fl. Calif. 3 (2): 380, in syn. 1943.
Lippia littoralis Kunth ex Moldenke, Alph. List Invalid Names
 Suppl. 1: 14, in syn. 1947 [not L. littoralis R. A. Phil., 1896].
Verbena littoralis H.B.K. ex F. A. Barkley, Determin. Ejemp. Herb.
 Fac. Nat. Agron. Medellin 5: 49, sphalm. 1949. Verbena littoralis
 H.B.K. ex Thorne, Castanea 16: 43, sphalm. 1951. Lippia littoralis
 Kunth ex Moldenke, Résumé 314, in syn. 1959. Verbena arborea
 Hort. ex Moldenke, Résumé 357, in syn. 1959 [not V. arborea H.B.
 K., 1948]. Verbena littoralis leptostachya Schau. ex Moldenke
 Résumé 368, in syn. 1959. Verbena littoralis var. pycnostachys f.
montana Osten ex Moldenke, Résumé 368, in syn. 1959. Verbena
littoralis var. leptostachya DC. ex Moldenke, Résumé 369, in
 syn. 1959. Verbena nudiflora Turcz. ex Moldenke, Résumé Suppl.
 2: 12, in syn. 1960. Verbena bonariensis sensu H. Mann, sensu
 Hillebr., sensu Heller, sensu Forbes, sensu Rechinger, sensu
 Frear, and sensu St. John & Hosaka apud Degener, Fl. Hawaii.
 315: Verbena: Littoralis, in syn. 1960. Verbena littoralis sensu
 Ripperton & Hosaka apud Degener, Fl. Hawaii. 315: Verbena: Lit-
oralis, in syn. 1960. Verbena littoralis sensu Fagerlund & Mitch-
 ell and sensu Egler apud Degener, Fl. Hawaii. 315: Verbena: Lit-
oralis, in syn. 1960. Verbena nudiflora Nutt. sensu Moldenke a-
 pud Degener, Fl. Hawaii. 315: Verbena: Littoralis, in syn. 1960.
Verbena littoralis var. glabra Mohr ex Moldenke, Résumé Suppl.
 6: 11, in syn. 1963. Verbena littoralis Kunth ex Moldenke, Résumé
 Suppl. 6: 11, in syn. 1963. Verbena littoralis var. affinis
 (Mart. & Gal.) Bourgeau ex Moldenke, Résumé Suppl. 6: 11, in
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